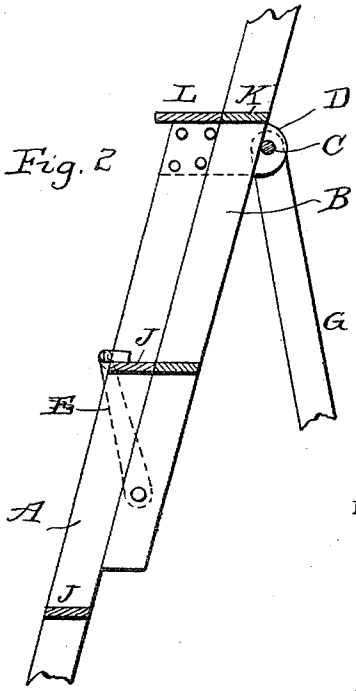
(No Model.)

W. O. DURYEA.

EXTENSIBLE STEP LADDER.

No. 600,196. Patented Mar. 8, 1898.

Fig. 2



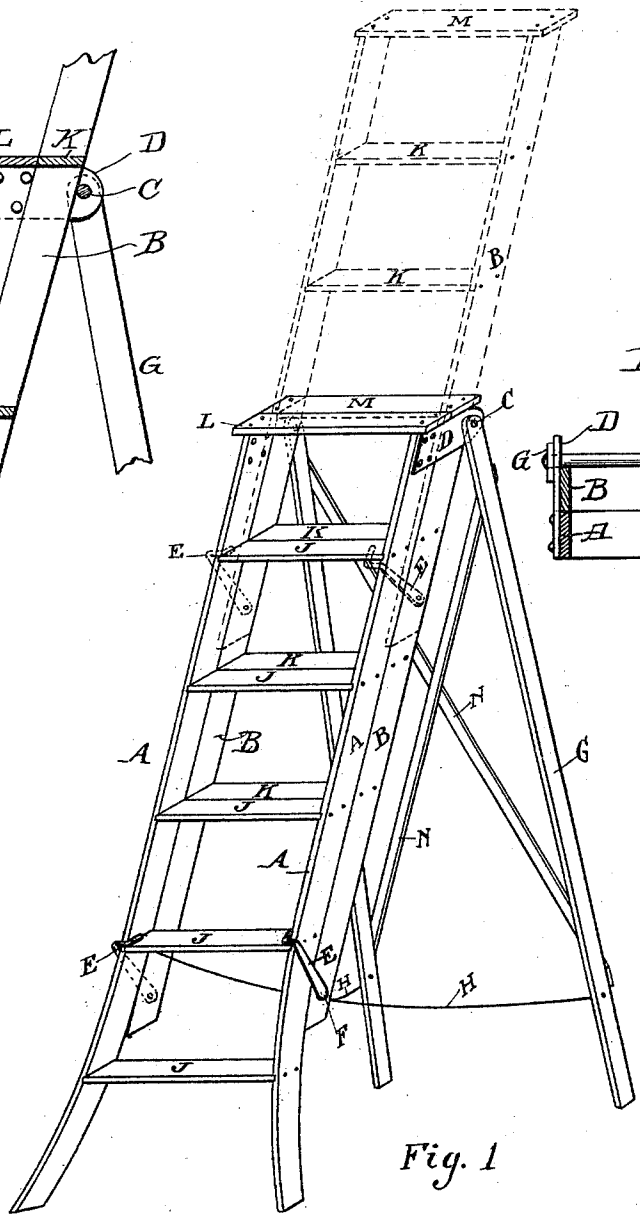
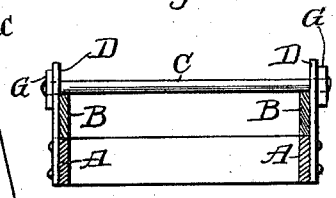


Fig. 1

Fig. 3



Witnesses.
Geo. H. Washburn
Edward G. Knauff

Inventor.
Wilbur O. Duryea
by X. Dane & Son
his Attys.

UNITED STATES PATENT OFFICE.

WILBUR O. DURYEA, OF MORNING SUN, IOWA.

EXTENSIBLE STEP-LADDER.

SPECIFICATION forming part of Letters Patent No. 600,196, dated March 8, 1898.

Application filed March 5, 1897. Serial No. 626,086. (No model.)

To all whom it may concern:

Be it known that I, WILBUR O. DURYEA, a citizen of the United States, residing at Morning Sun, in the county of Louisa and State of Iowa, have invented certain new and useful Improvements in Extensible Step-Ladders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in extension step-ladders.

The object is to provide a simple, substantial, and evenly-balanced step-ladder which, as its name implies, can be extended or lengthened at pleasure and when so extended or lengthened the upper portion can be used without overtopping.

A further object is to provide simple and reliable means for fastening the sections composing the ladder together.

A still further object is to provide a ladder of such construction and arrangement that certain of its steps will always be widened by steps of the extension-section being in alinement with steps of the main section.

With these objects in view my invention consists in certain novel features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved step-ladder, with dotted lines indicating the position taken by the extension-section when the ladder is lengthened. Fig. 2 is a detail of a portion of the ladder in vertical section, and Fig. 3 is a horizontal section taken just over rod *c*.

A represents the main portion of the ladder, and B is the extension-section. The main section has the general form of an ordinary step-ladder with steps J J and top step L. It also has the usual hinged support G, braced, as shown, by the crossed strips N N and held from spreading at the bottom beyond a given extent by the cords H H. Instead, however, of the brace G being hinged directly to the sides of the ladder at the upper end, a pair of arms D D are secured to the sides of the main section A at a point just beneath the top step L, preferably, and to the outer ends of these arms D D the brace G is hinged by means of a rod C, which extends across from one arm D to the other, the protruding or extended ends forming the bearings or pintles for the brace to turn upon.

The extension-section B has steps K K and a top step M, corresponding in relative position to the steps of the main section. This section B of the ladder is guided and confined in its sliding movement up and down relative to the main section by the side strips of the main ladder, the arms D D, which embrace its extreme outer surfaces, and the rod C, which extends back of it.

Securing devices, by preference in the form of hooks E E, hold the extension in its various positions. These securing devices are pivoted independently of each other, one to each side of the extension B, at a point near the extreme lower end. The free end of each hook is bent inward across the forward edge of the side of the main section and then alongside the inner surface of the side, or in similar fashion, its function being to rest upon a step and hold the extension-section B of the ladder secure against downward movement, and the length of the devices E E is such that while the free ends are resting upon one step out of the way at the corner, as shown, the steps above fall in line with certain steps of the main section, doubling their width and making them very much more substantial to stand upon and rendering the top step L M particularly convenient for supporting a pail or other article. In this way the sides of section B are held by the hooks and by the aid of cross-rod C firmly bound against the sides, and the construction and arrangement are such that the heavier the weight applied upon section B the tighter and more secure the fastening effected.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a ladder, the combination with a main section, of an extension-section and a pair of hooks independent of each other pivoted to the extension-section, their free ends extending around the two edges of the main section of the ladder.

2. The combination with a main and an ex-

tension section of a ladder, of a hook pivoted to one section, said hook bent inward at its free end across an edge of the other section and thence at right angles alongside and parallel with the inner surface of the side of the ladder.

3. The combination with the main and extension sections of a ladder, of a hook connected with the extension-section, said hook bent to rest on a step of the main section and of such length that steps of both sections fall in alinement and constitute extensions of each other.

4. The combination with the main portion and brace of a step-ladder hinged together in the usual manner, of an extension-section the sides and steps of which aline with the sides and steps of the main section, means for confining the upper end of the extension-section, and hooks hinged to the sides of the extension-section and adapted to be placed alongside the sides of the main section with their free ends resting on a step of the main section.

In testimony whereof I affix my signature in presence of two witnesses.

WILBUR O. DURYEA.

Witnesses:
CHAS. C. CLARK,
JNO. J. SENLEY.